

*BT  
loads*

a second circuit [- means II] coupled to the secondary winding for supplying current to [generating a current through] the lamp[,];

wherein [characterized in that] the secondary winding, the input terminals, and the second circuit [means II] are coupled together such that the second circuit is [means II are] supplied by [during lamp operation with] a voltage whose amplitude is equal to the sum of the first DC voltage and the second DC voltage.

Claim 2, line 1, change "A" to --The--.

Please cancel claim 3, without prejudice.

Claim 4, line 1, change "A" to --The--;

line 2, change "means I" to --first circuit--.

After claim 4, add the following new claims:

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5. The circuit arrangement as claimed in Claim 2, wherein the first circuit comprises a DC-DC converter of the flyback type.

6. The circuit arrangement as claimed in Claim 4, wherein the first circuit comprises a DC-DC converter of the flyback type.

#### Remarks

In view of the above-amendatory matter and remarks to follow, reconsideration and allowance of the application are respectfully requested.

The specification has been amended by the inclusion of headings to identify the various parts of the specification. The specification also has been amended to correct obvious editorial errors. The Abstract has been amended to more clearly describe the gist of the technical disclosure. Claim 1 has been amended to more fully define the invention. Claims 2 and 4 have been amended to correct an obvious editorial error. Claim 3 has been cancelled, without prejudice. Claim 4 also has been amended to conform to the changes made to claim 1. New claims 5 and 6 have been added to more fully define the invention.

Turning now to the Office Action under reply, claim 3 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for lack of antecedent basis. The Section 112 rejection has been rendered moot by cancellation of claim 3 and will not be further addressed herein.

Claims 1-4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,277,728 (Stevens) in view of U.S. Patent No. 3,079,525 (Tap). This rejection is traversed for the following reasons:

The invention as defined by claim 1, and claims 2 and 4-6 dependent directly or indirectly on claim 1, is directed to a circuit arrangement for operating a lamp. The circuit arrangement comprises a first circuit and a second circuit. The first circuit generates a second DC voltage from a first DC voltage and includes input terminals for connection to a voltage

source for supplying the first circuit with the first DC voltage. The first circuit also includes a switching element, a control circuit coupled to the switching element for changing the conductive state of the switching element, a unidirectional element and a transformer having a primary and a secondary winding. The second circuit is coupled to the secondary winding for supplying current to the lamp. The secondary winding, the input terminals, and the second circuit are coupled together such that the second circuit is supplied by a voltage whose amplitude is equal to the sum of the first DC voltage and the second DC voltage.

Advantageously, by supplying a voltage to the second circuit which is equal to the sum of the first DC voltage and the second DC voltage significant power savings can be realized. The voltage applied to the second circuit, as defined by claim 1, permits a direct supply of power to the second circuit without first passing through the first circuit. Power losses associated with the transformer of the first circuit can be maintained at a comparatively low level. This is particularly important during run-up of the lamp.

In contrast thereto, the Stevens power supply does not supply its second circuit (considered in the Office Action to be the Stevens' inverter) with a voltage equal to the sum of the first DC voltage and the second DC voltage. The Tap voltage converter fails to overcome this deficiency of the Stevens power

supply. The Office Action does not identify first and second circuits in the Tap voltage converter so as to determine the applicability of the Tap disclosure in modifying the Stevens lamp. Applicants' attorney has been unable to identify any second circuit in the Tap voltage converter which has a voltage equal to the sum of a first DC voltage and a second DC voltage as defined by claim 1.

It is also not clear how the Stevens power supply would be modified by the Tap disclosure so as to render claim 1 obvious. The Office Action considers the inverter of the Stevens power supply to be the second circuit of claim 1. Based on the inverter being the second circuit of claim 1, it is not seen how the battery of the Tap voltage converter would be added to the Stevens power supply such that the input terminals and a secondary winding of a first circuit are coupled with the second circuit whereby the voltage applied to the second circuit is equal to the sum of the first DC voltage and the second DC voltage. In other words, even if the battery were added to the Stevens power supply as taught by the Tap disclosure, it is not seen how the modified Stevens power supply would have a first circuit with input terminals for connection to a voltage source for supplying the first circuit with the first DC voltage, conform to the above required coupling and supply the required sum of the first DC voltage and the second DC voltage to the Stevens inverter.

Furthermore and more importantly, there is no teaching or suggestion in the Tap patent to modify the Stevens power supply such that the voltage supplied to the Stevens inverter input would be equal to the sum of the Tap battery and another DC voltage source. The Tap patent teaches a circuit arrangement in which no-load voltages are avoided. The Tap battery merely serves as a supply source for the converter. Modification, if possible, of the Stevens power supply based on the Tap patent would result in changes connecting the input of the push-pull Stevens inverter to the lamp load and not in the DC input to the Stevens inverter.

It is therefore respectfully submitted that the Stevens and Tap patents, whether taken singly or in combination, do not render the invention as defined by claims 1, 2 and 4-6 unpatentable. Withdrawal of the Section 103(a) rejection is respectfully requested.

Applicants have made a comprehensive and diligent effort to place the application in condition for allowance and notice to the effect that claims 1, 2 and 4-6 are allowable is respectfully requested.

In the event that the Patent Examiner is unable to issue a Notice of Allowance for any reason, the Patent Examiner is



requested to telephone the undersigned attorney at the number listed below to resolve any outstanding issues.

Respectfully submitted,

By

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On December 4 1997  
By *Edward Blocker*